

externally parasitic upon insects, has just been monographed by Roland Thaxter.¹ The paper is intended as a preliminary communication on American species, eventually to form a part of a monograph of Entomogenous plants. Two new genera are described (*Peyritschiella* and *Cantharomyces*), and eight new species. Peck's *Appendicularia entomophila* is referred to *Stigmatomyces* Karsten. The author requests attention to the following errata: p. 10, lines 1, 26 and 28, for *Blidii* read *Bledii*; line 21, for *Blidius* read *Bledius*.

PROFESSOR GEO. F. ATKINSON has published a monograph of the Lemnaceæ of the U. S.,² with three double plates. The author deals with the habitat, the general morphology, the germination of spores, the development of the protonema (prostrate form and *Chantransia*-form), development of the sexual shoot, development of the reproductive organs, fertilization and development of the carpospores, branching of the sexual shoot, and a presentation, with synonymy and range, of the seven species found in the United States.

WARD'S "*Plant Organization*"³ is another claimant for attention in the line of blanks for the description of flowering plants. As to method it is a considerable elaboration of the well known Apgar's Plant Analysis with numerous improvements. The first twenty-seven pages give an exhaustive terminology with diagrammatic illustrations, followed by a tabular arrangement of the orders of phanerogams. In both places we object to the prominence given to English terms and names over the technical and scientific, but as both are given the teacher can take his choice. The blanks which follow require most exhaustive examination in order to fill them out completely, being so detailed as to be "fussy." For most classes the time demanded could be spent more profitably in other ways. A special feature is the tying of the blanks in such a way that they can be removed and submitted separately for correction.

NOTES AND NEWS.

THE ANNUAL BANQUET in honor of Henry Shaw will be given at the Southern Hotel, St. Louis, May 26.

MR. W. B. HEMSLEY writes about the genus *Asarum* in *Gardeners Chronicle* (April 5), and describes three new Chinese species.

DURING THE recent expedition of Sir W. Macgregor to the highlands of New Guinea, a small but very important collection of plants was made at from 8,000 to 13,000 feet altitude. Baron von Mueller has reported on the 64 Phanerogams, 33 of which are found to be new and endemic, and two of these are new genera. Mr. J. G. Baker has just reported upon the Pteridophytes (*Jour. Bot.* April), and of the 70 species collected 18 are new, 11 of which are new species of *Polypodium*.

¹ Proc. Am. Acad. Feb. 12, 1890, pp. 5-14.

² Annals of Botany, vol. iv, no. xiv. May, 1890.

³ WARD, R. HALSTEAD.—*Plant Organization*. A review of the structure and morphology of plants by the written method. Second edition, revised. pp. 31, 50 blanks. 7½ x 9½ inches. Boston: Ginn & Co., 1890.

MR. J. G. SMITH, of Lincoln, Neb., sends a sport of *Erythronium albidum* which has 4 sepals, 3 petals, 8 stamens, and a 4-lobed stigma.

MR. E. CLAASSEN, of Cleveland, Ohio, writes that he has discovered *Nelumbo lutea* growing abundantly at one locality on the shore of Chippewa Lake, Medina county, Ohio.

MR. ROBERT H. LAMBORN, in the *Am. Naturalist* (April), discusses cypress "knees." He rejects their commonly accepted aërating function and apparently on very good grounds, considering them to be merely so many "trusses" for bracing the roots in holding the tree firmly in yielding material.

THE MEETING of the A. A. A. S. at Indianapolis next August promises to be one of the largest meetings in the history of the Association. Very complete arrangements have been made in the way of entertainment, and the rooms secured in the new State House are everything that could be desired. There will be a great gathering of botanists, as there should be, with a botanist as president. All botanists should make a point of coming, not chiefly to make a botanical crowd, but for the privilege of meeting a great assemblage of botanists.

AT A RECENT meeting of the Linnean Society, of London, Sir John Lubbock gave an abstract of several memoirs. One was "On the shape of the oak leaf," in which an attempt was made to explain the following peculiarities, viz.: The deep rounded sinuses, the lack of symmetry, and the oblong or oblanceolate outline. The author thinks that the sinuses and lack of symmetry are to be explained by the curvature of the leaf in the bud, owing to the shortness of the bud in comparison with the length of the leaf, and the infolding of one edge.

A NEW BIOLOGICAL journal, *Zoe* by name, comes from the Pacific coast, published at San Francisco by the Zoe Publishing Company. The subscription is \$2, and the first number speaks well for the new enterprise. The "introduction" speaks of the purpose being to furnish a suitable medium for "the numerous, often unconnected observations, pertaining more particularly to the western part of N. Am." No names of editors appear, but the botany of this first number is as follows: Nomenclature of organic life, by *H. W. Harkness*; An arborescent *Polygala*, and A Carbon forest, by *T. S. Brandegee*; Notes on the naturalized plants of S. Calif. I, by *S. B. Parish*; Dodecatheon *Meadia*, by *Katharine Brandegee*; *Crossosoma*, by *F. H. Vasilit*.

IN HIS interesting monograph of the genus *Podaxis* (*Jour. Bot.*, Feb. and Mar.) Mr. George Masee makes the following statement as to geographical distribution: "The species of *Podaxis*, seven in number, are not abundant anywhere, and being very conspicuous and readily preserved, it is not to be expected that many novelties remain to be discovered, or the range of known species extended to any marked extent. There is a primitive quaintness in the general morphology, which, added to the fact that the known species are confined to geologically old-fashioned places, suggests that we are dealing with the fragmentary remains of a first attempt to emerge from the altogether subterranean habits of the pioneers of our modern group of *Gastromycetes*. The genus ranges from St. Domingo, California, 116° W. long., to Brisbane, 153° E. long., and from New Mexico, 35° N. lat., to Melbourne, 37° S. lat. All the species are met with in arid, sandy districts." The single American species, is a new one, *P. Farlowii*, from Arizona and New Mexico.

THE PHILADELPHIA Academy of Natural Sciences, the oldest institution of its kind in America, is about to make an extensive addition to its building. The cost of the improvement is estimated at \$239,000, and an appeal for help is made to the friends of the Academy. The botanical fraternity are interested in the movement, as the Academy possesses one of the great American collections of plants, the flowering plants alone numbering over 35,000 species.

DR. GEORGE THURBER'S recent death has called forth an excellent short biographical sketch in *Garden and Forest* (April 9), in which he is said to have been "the most accomplished horticultural writer America has produced." He was born in Providence, R. I., in 1821, and had his botanical interests aroused by Dr. Torrey, through whom he secured the position of naturalist on the Mex. Bound. Survey. His collections were very rich, and among them a new genus of mallows was called *Thurberia* by Dr. Gray. The chief part of his subsequent life was spent as editor of the *American Agriculturist*, a position which he filled for 22 years, resigning in 1885 on account of failing health. In botany, his name is chiefly associated with the grasses, and it is to be regretted that his ill health and editorial duties did not permit him to prepare the monograph he had intended.

AS A FURTHER contribution to our knowledge of aleurone grains which has been making such rapid advances lately, we note a paper by Franz Lütke¹ which gives special attention to the chemical relations of the various parts of the grain. His conclusions are as follows:

Aleurone grains often contain no inclusions. The membrane and ground-substance (and after a longer time also the globoid and crystals) are soluble in sodic phosphate; the crystalloids are insoluble. Lime water is the best solvent for crystalloids, ground-substance and the membrane. Absolute alcohol (one to two days immersion) is much to be preferred for hardening to the 2 p. c. sublimate-alcohol usually used. Swelling of the resting seeds by water can at most dissolve only the peripheral part of the aleurone grains; the rest is insoluble. The solution of globoids and crystalloids is one of the first effects of germination. The formation of the inclusions does not take place in the vacuoles, but free in the cell contents; their solution occurs partly within the membrane and partly after its solution.

THE FOLLOWING extract from a private letter written by Prof. W. J. Beal gives exact information concerning the recent disaster at the Michigan Agricultural College:

"Last night (March 24) after midnight our botanical laboratory and museum were burned. The fire caught near the top of the building, and gave an opportunity to save all the books, microscopes, charts, and other apparatus, including all the herbarium which was mounted. In an upper room was stored the herbarium of over 7,000 species recently purchased of C. F. Wheeler. This was lost, as were also the electrotypes to partially illustrate my second volume on grasses. The loss of building and cases was about \$7,500, and the collection destroyed perhaps \$4,000 more. Although the building is gone, hope and courage are still left to myself and three assistants. We expect to have a finer building and a better museum. For the present, very good quarters are given us in a part of the new agricultural laboratory recently built."

It will be remembered that the building destroyed was illustrated in the GAZETTE for December, 1885.

¹ Prings. Jahrb. f. wiss. Bot. xxi. 61-127, pl. ii-iv.